U.S. Department
of Transportation
Pipeline and
Hazardous Materials
Safety Administration

400 Seventh Street, S.W.
Washington, D.C. 20590

**COMPETENT AUTHORITY CERTIFICATION
FOR A TYPE FISSILE
RADIOACTIVE MATERIALS PACKAGE DESIGN
CERTIFICATE USA/0490/AF-96, REVISION 9**

**REVALIDATION OF JAPANESE COMPETENT AUTHORITY
CERTIFICATE J/37/AF-96**

This certifies that the radioactive material package design described is hereby approved for use within the United States for import and export shipments only. Shipments must be made in accordance with the applicable regulations of the International Atomic Energy Agency[1] and the United States of America[2].

1. Package Identification - NT-IV.

2. Package Description and Authorized Radioactive Contents - as described in Japan Certificate of Competent Authority J/37/AF-96, 0 (attached). The contents are limited to two unirradiated uranium dioxide fuel assemblies, total weight not to exceed 560 kg, arranged in a 9x9 square array of rod locations with a maximum fuel cross section area of 5.0 inches square, a pellet diameter up to 1.016 cm (0.40 inch), a maximum nominal pitch of 1.45 cm (0.57 inch), a maximum fuel length of 380 cm (150 inches) and a maximum enrichment of 5.0 w/o U-235. Uranium daughter isotopes are not included in the activity limit. Each assembly must have a water channel in a central 3x3 rod position (central means within one row and column of the center 3x3 positions). There may be gadolinia-bearing rods in the assembly, but they are not required. Plastic shims between fuel rods are allowed up to 26 gm plastic/cm length of shimmed area of the fuel assembly. Any plastic sheathing used around the fuel bundle must be free draining on both ends of the fuel bundle.

3. Criticality - The minimum criticality safety index is 0.0. The maximum number of packages per conveyance is determined in accordance with Table X of the IAEA regulations cited in this certificate.

4. General Conditions -

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[1] "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency(IAEA), Vienna, Austria.

[2] Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

a. Each user of this certificate must have in his possession a copy of this certificate and all documents necessary to properly prepare the package for transportation. The user shall prepare the package for shipment in accordance with the documentation and applicable regulations.

b. Each user of this certificate, other than the original petitioner, shall register his identity in writing to the Office of Hazardous Materials Technology, (PHH-23), Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, Washington D.C. 20590-0001.

c. This certificate does not relieve any consignor or carrier from compliance with any requirement of the Government of any country through or into which the package is to be transported.

d. This certificate provides no relief from the limitations for transportation of plutonium by air in the United States as cited in the regulations of the U.S. Nuclear Regulatory Commission 10 CFR 71.88.

e. Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations[1] shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the applicable requirements of Subpart H of 10 CFR 71.

5. Special Conditions -

a. The transport index of each package shall be determined by direct measurement.

b. For shipments entering, exiting or transiting the United States, all international approvals and revalidations, including Approval of Packaging and Confirmation of Packaging certificates issued by the government of Japan, shall be issued prior to commencement of transport.

c. In accordance with the attached Japanese Certificate of Competent Authority, the package is not to be transported by air.

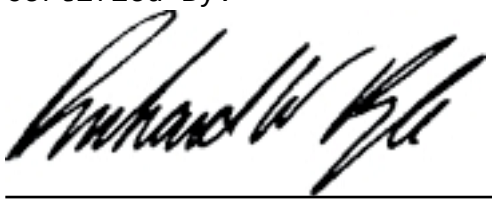
6. Marking and Labeling - The package shall bear the marking USA/0490/AF-96 in addition to other required markings and labeling.

7. Expiration Date - This certificate expires on May 25, 2009.

CERTIFICATE USA/0490/AF-96, REVISION 9

This certificate is issued in accordance with paragraph 814 of the IAEA Regulations and Section 173.472 and 173.473 of Title 49 of the Code of Federal Regulations, in response to the October 10, 2006 petition by Areva, Lynchburg, VA, and in consideration of other information on file in this Office.

Certified By:



Bob Richard
Deputy Associate Administrator for Hazardous Materials Safety

Feb 12 2007
(DATE)

Revision 9 - Issued to endorse, for specified contents, Japanese Certificate of Approval No. J/37/AF-96 dated September 25, 2006.

IDENTIFICATION MARK
J/37/AF−96

COMPETENT AUTHORITY
OF
JAPAN

CERTIFICATE FOR APPROVAL OF PACKAGE DESIGN FOR THE TRANSPORT OF RADIOACTIVE MATERIAL

ISSUED BY

MINISTRY OF ECONOMY, TRADE AND INDUSTRY
1−3−1, KASUMIGASEKI, CHIYODA−KU
TOKYO, JAPAN

CERTIFICATE FOR APPROVAL OF PACKAGE DESIGN FOR THE TRANSPORT OF RADOOACTIVE MATERIAL

This is to certify, in response to the application by Nuclear Fuel Industries, Ltd., that the package design described herein complies with the design requirements for a package containing fissile uranium dioxide fuel assemblies, specified in the 1996 Edition (As Amended 2003) of the Regulations for the Safe Transport of Radioactive Material (International Atomic Energy Agency, Safety Standards Series No. TS-R-1) and the Japanese rules based on the Law for Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors.

This certificate does not relieve the consignor from compliance with any requirement of the government of any country through or into which the package will be transported.

COMPETENT AUTHORITY
IDENTIFICATION MARK : J/37/AF−96

Sep. 25 2006
Date

Masanori Amano
Director
Nuclear Fuel Transport and Storage
Regulation Division
Nuclear and Industrial Safety Agency
Ministry of Economy, Trade and Industry
Competent Authority of Japan
for Package Design Approval

1. DESIGN APPROVAL NUMBER : J/37/AF-96

2. NAME OF PACKAGE : NT−IV

3. CATEGORY OF THE PACKAGE : Type A Fissile package

4. SPECIFICATION OF PACKAGING
   (1) Nuclear Fuel Package Illustration : See the attached Figure 1
   (2) Total Weight of Nuclear Fuel Package : 1,660kg or less
   (3) Outer Dimension of Packaging
      (i) Length : Approximately 5,300mm
      (ii) Width : Approximately 830mm
      (iii) Height : Approximately 820mm
   (4) Material of Packaging : See the attached Table 1
   (5) Descriptions of Nuclear Fuel Materials and so on : See the attached Table 2

5. RESTRICTIONS ON TRANSPORT
   (i) Restriction Number : Infinite
   (ii) Array : No Restriction
   (iii) Criticality Safety Index : 0

6. SPECIAL FEATURES IN THE CRITICALITY ASSESSMENT
   The subcriticality calculation is evaluated upon the assumption that the container is in immersion condition by water under the normal conditions and accident conditions in transport except inside of the fuel rods.

7. DESCRIPTION OF NON APPLICABLE DESIGN STANDARD OF TYPE BU FISSILE PACKAGE ABOUT TYPE BM FISSILE PACKAGE
   Not applicable

8. INSTRUCTIONS ON USE AND MAINTENANCE OF PACKAGING
   (1) Instructions on Maintenance of Packaging
      (a) The packages or packagings shall be lifted with a forklift or exclusive crane.
      (b) The packaging shall be prevented from being immersed by rainwater in order to keep the packaging in goodness, being covered by waterproof sheets etc. in outside or inside of facility.
      (c) Periodic independent inspections of each packaging shall be conducted more than once per year. (In case where a packaging is used for transport more than ten times per year, the periodic inspections shall be conducted at least once every ten transports.)

(2) Actions prior to Shipment

Each package shall be checked for the following items before shipments.

(i) Visual Inspection
(ii) Lifting Inspection
(iii) Weight Measurement
(iv) Surface Contamination Measurement
(v) Radiation Dose Rate Measurement
(vi) Subcriticality Inspection
(vii) Content Inspection

(3) Precautions for Loading of Package for Transport

Loading of the package shall be performed such that the package will not move, roll down or fall down during transport.

9. THE ISSUE DATE AND EXPIRY DATE OF CERTIFICATE

(1) Issue date : May 26, 2006
(2) Expiry date : May 25, 2009

Table 1 Material of Packaging

Component	Material
Outer Container	Carbon Steel (SS400)
Inner Container	Carbon Steel (SS400)
Buffer agent	Honeycomb Paper, Polyethylene Foaming Object
Packing	Neoprene Rubber
Skid	Wood
Bolt and Nut	Stainless Steel (SUS304) and Chromium Molybdenum Steel (SCM435)

Table 2 Descriptions of Nuclear Fuel Materials and so on

Fuel Type		Fuel Assembly			
		8×8	New Type 8×8	High burnup 8×8	9×9 (Type B)
(Per Packaging)					
Description		Fuel Assembly (Uranium Oxide)			
Physical State		Solid (UO_2 Pellet or Gadolinia-UO_2 Pellet)			
Number of Fuel Assembly		2 or less			
Weight of U		390kg-U or less			
Total Activity		63GBq or less			
Initial Enrichment		5% or less			
Burnup Rate		Not applicable			
Total Heat Generation Rate					
Cooling Time					
(Per Fuel)					
Weight	Weight of Fuel Assembly	About 280kg	About 270kg	About 265kg	About 260kg
	Weight of U	About 195kg	About 180kg	About 180kg	About 175kg
Specification of Impurities in Enriched Uranium		$^{232}U \leqq 2\times10^{-9}g/g^{235}U$ $^{234}U \leqq 1\times10^{-2}g/g^{235}U$ $^{236}U \leqq 5\times10^{-3}g/g^{235}U$ $^{99}Tc \leqq 2\times10^{-7}g/g^{235}U$			

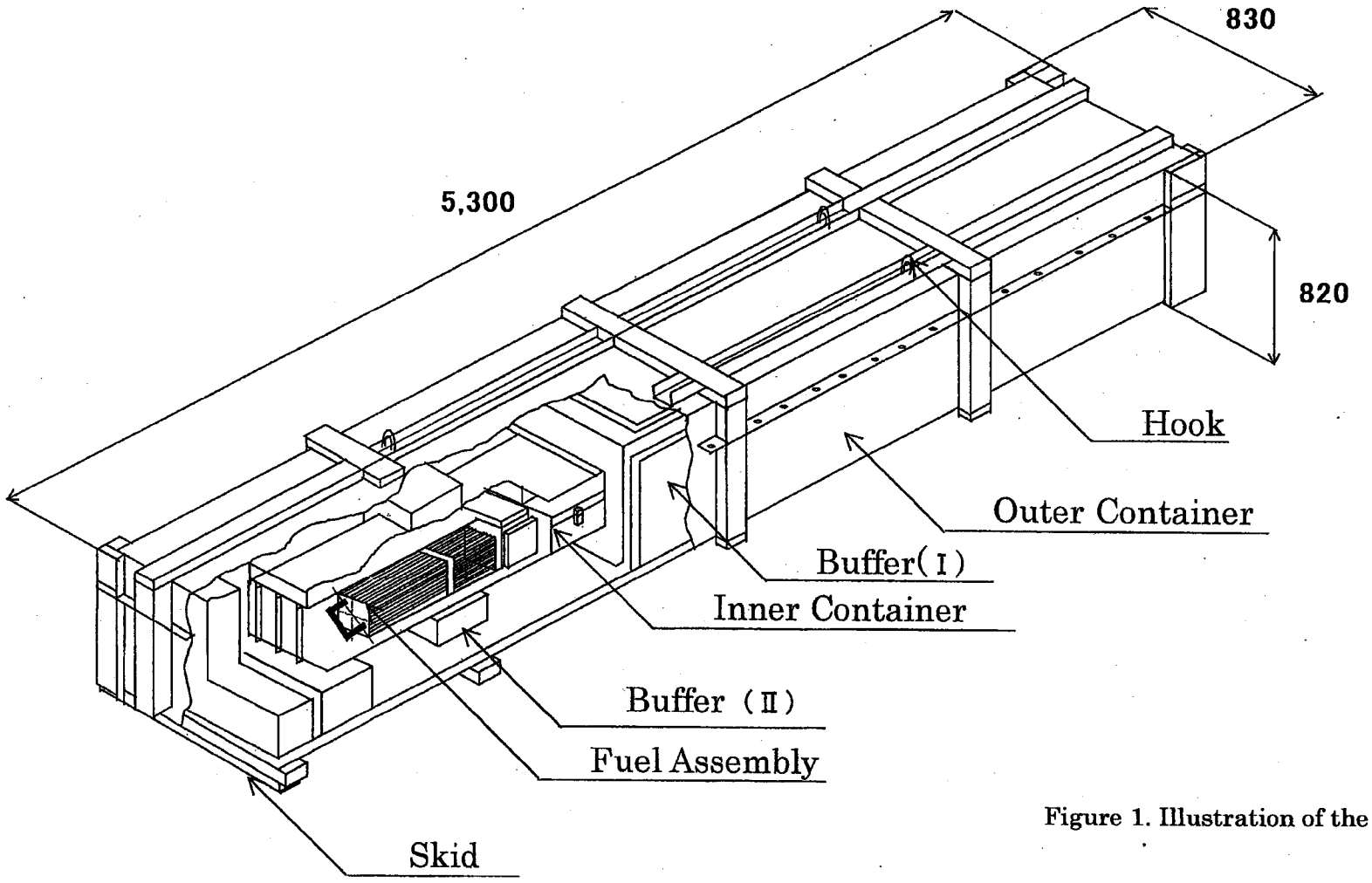


Figure 1. Illustration of the Package

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CERTIFICATE NUMBER: USA/0490/AF-96, Revision 9

ORIGINAL REGISTRANT(S):

Richard Montgomery
Nuclear Criticality Safety & Shipping Containers
Areva
1724 Mount Athos Road
P.O. Box 11646
Lynchburg, VA 24506-1646

Mr. Julio Raffo
Director of Transport Operations
Areva
7135 Minstrel Way
Suite 300
Columbia, 21045
USA

Mr. Jim Davis
Areva
P.O. Box 11646
Lynchburg, VA 24506-1646

Mr. Charlie Holman
Areva
P.O. Box 11646
Lynchburg, VA 24506-1646

REGISTERED USER(S):

Mr. Darren Condrey
Transport Logistics International
Transport Logistics International
4000 Blackburn Lane
Suite 250
Burtonsville, 20866
USA

Mr. Mark Lambert
Transport Logistics International
Transport Logistics International
4000 Blackburn Lane
Suite 250
Burtonsville, 20866
USA